

Operations and Maintenance Manual

Los Alamos National Laboratory
Laboratory Implementation Requirements LIR 230-05-01.0
Issue Date: 07/16/98

MANDATORY DOCUMENT

1.0 Introduction

- 1.01 Lessons Learned** Note: [Click here](#) for Lessons Learned *that may apply* to the requirements contained in this LIR.

The Los Alamos National Laboratory (LANL) consists of many facilities (buildings and infrastructure) which support varied and diverse programs. The continuing reliability and integrity of facilities, utilities, infrastructure, and equipment at the Laboratory is dependent on established programs of routine maintenance and operations. These maintenance and operational programs are based on regulations, industry codes and requirements, DOE/UC contract requirements (appendix G), and specifically adopted Laboratory Performance Requirements (LPRs). The LPRs specifically addressed by this document are LPR 230-01 Managing Facility Assets, LPR 230-03 Facility Condition and Inspection, LPR 230-04 Conduct of Maintenance, LPR 230-05 Preventive Maintenance, and LPR 230-07 Maintenance History, and LPR-404-00 Environmental Protection.

The contents of this document shall be effective 60 days after the issue date.

See Attachment A (Guidance) for Recommended Major Implementation Criteria for Self-Assessment.

2.0 Purpose

This LIR establishes the Operations and Maintenance Manual and requires the use of the included Criteria by all LANL Facility Management Units (FMUs) and other organizations in the establishment of operations and maintenance programs. The Operations and Maintenance Manual defines those minimum operations and maintenance requirements that must be implemented for LANL facilities and equipment.

3.0 Scope and Applicability

This LIR shall apply to all personnel performing maintenance and operational activities within LANL. The maintenance and operational requirements presented in the Operations and Maintenance Manual shall apply to all property used at the Laboratory that is specifically addressed by a Criterion. The equipment Criteria are established primarily to address facility equipment.

4.0 Definitions

Standards

Those laws, regulations, industry codes, DOE Orders, and other documents adopted by the Laboratory as the minimum set of operational and safety standards by which the Laboratory shall adhere to in the operation of its facilities and performance of its work. These are referred to as the Work Smart

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Standards and are incorporated as a part of Appendix G of the UC/DOE Contract.

Criterion

As used in this LIR the term "Criterion" refers to a document contained within the Operations and Maintenance Manual which presents specific requirements for the subject system, equipment, or process relating to maintenance and operation

Section

A portion of the Operations and Maintenance Manual which contains a number of Criteria grouped by a specific engineering discipline or system/equipment type

Office of Institutional Coordination (OIC)

The group or office responsible for establishing, coordinating, and supporting the implementation of a requirement and any associated guidance.

5.0 Responsibilities

Division Directors/ Program Directors/ Office Directors shall be responsible for assuring maintenance and operational programs required for the safe, reliable, and efficient operations of Laboratory FMU's under their jurisdiction are established and implemented in accordance with the provisions of this document.

Facility Managers shall be responsible for implementing maintenance and operational programs including the preparation and maintenance of required procedures and documentation within their FMU and under their jurisdiction in accordance with this LIR and the Operations and Maintenance Manual.

Group Leaders shall be responsible for implementing maintenance and operational surveillance programs including the preparation and maintenance of required procedures and documentation for equipment under their jurisdiction that is covered by these Criteria.

FE-1 Standards Team shall be responsible for assuring that the Operations and Maintenance Criteria are electronically published and maintained in a timely manner.

FE-9 Facilities Engineering Services shall be the OIC for this LIR and shall be responsible for coordinating the overall format and content of the Operations and Maintenance Manual.

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Contributing Organizations (e.g. FE-8, FE-9, FE-21, ESH-5, ESH-17, IFMPO, etc.) to the Operations and Maintenance Manual shall be responsible for the following:

- The technical content of those Criteria to which they are assigned lead responsibility and ensuring the Criteria are maintained current with the applicable regulations, codes, and LANL requirements.
- Verifying the Support Services Subcontractor procedures and programs comply with the Criteria for which they have lead responsibility.

6.0 Requirements

6.1 Content and Format

The Operations and Maintenance Manual shall consist of a number of Sections which reflect the major classifications of system and equipment used and operated at the Laboratory. Each Section shall include the Criteria applicable to these major classifications. A standard format shall be adopted for the Criteria. Each Criterion shall clearly define or describe the specific requirements for the equipment or process covered and, for each requirement presented, shall reference the source document of the requirement when possible. Requirements that are adopted as a result of commitments made to the Department of Energy, or other regulatory bodies, as a result of inspections, audits, or accident investigations shall reference the specific report where the commitment was made.

Note: When appropriate, information on implementation guidance or industry/laboratory good practices may be included as part of the Criterion as an aid in implementing the requirements stated. These should be clearly presented and identified as a good practice and are guidance not requirements.

Requests for new Criteria shall be made to FE-1 or the organization having technical jurisdiction over that particular subject area of the Operations and Maintenance Manual.

6.2 Administration

A formal process shall be established and incorporated into the Manual for the review, revision and approval of the Operations and Maintenance Criterion. This process shall be coordinated through IFMPO and include a review of the Criteria by the Facility Management Council in accordance with the provisions of the FMC Charter prior to adoption

New or revised Operations and Maintenance Criteria shall be added to the Operations and Maintenance Manual as further requirements and needs are identified or changes made to Standards or LANL

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requirements. Following the completion of the approval process for a new or revised Criterion, a period of 90 days shall be allowed from the date of issuance for the implementation of the new requirements.

The Operations and Maintenance Manual shall be maintained on the FE Division home pages for use by all organizations performing maintenance and operational testing activities.

6.3 Application

The Operations and Maintenance Manual defines the minimum maintenance and operational criteria for facilities, structures, systems, and components that shall be followed at the Los Alamos National Laboratory. Organizations responsible for the operations and maintenance of the structures, systems, and components addressed by these Criteria shall be responsible for establishing appropriate implementing processes and procedures to meet the stated requirements. Questions regarding the content or implementation of the Criteria shall be directed to the organization having technical jurisdiction over the Criteria.

Facility Managers and Group Leaders shall assure that operations and maintenance services supplied by vendors and subcontractors on equipment under their jurisdiction are performed in accordance with these Criteria.

7.0 References

7.1 Document Ownership

The Office of Institutional Coordination(OIC) for this LIR shall be FE-9 Facilities Engineering Services.

7.2 Referrals

FE-1: Availability of the Criteria, status of revisions, request for revisions.

FE-9: Technical content of assigned Criteria, responsible for Criteria related to facility systems and equipment

FE-8: Technical content of assigned Criteria, responsible for Criteria related to utilities and infrastructure

FE-21: Technical content of assigned Criteria, responsible for Criteria related to fire protection systems and equipment

ESH-Groups: : Technical content of assigned Criteria, responsible for Criteria related to environmental protection and safety-related equipment and system maintenance activities

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7.3 Documents

LPR 230-01 Managing Facility Assets

LPR 230-02 Facility Condition and Inspections

LPR 230-04 Conduct of Maintenance

LPR 230-05 Preventive Maintenance

LPR 230-07 Maintenance History

LPR 404-00 Environmental Protection

LIR 230-04 Laboratory Maintenance Management Program

UC/DOE Contract No.: W-7405-ENG-36, Appendix G and Work Smart Standards

7.4 Attachments

A: Recommended Major Implementation Criteria for Self Assessment

Guidance

Attachment A

Recommended Major Implementation Criteria for Self-Assessment

(Non-Mandatory)

LIR Title	LIR Number
Operations and Maintenance Manual	LIR 230-05-01.0

The major implementation criteria listed below are provided to assist Laboratory organizations assess their implementation of this LIR. These criteria provide an objective basis for self-assessing implementation of the major requirements contained in the LIR. The LIR also states requirements in other areas, such as, scope, precautions, and responsibilities that, when applied, complement the successful implementation of these major requirements.

- 1. The most important criterion for assessing the implementation status of this LIR should be, if applicable: Have the requirements contained in the LIR been communicated to the individual(s) responsible for performing the work?**
- 2. In addition, the recommended major implementation criteria for self-assessment of this LIR are the following:**
 - The LIR establishes the Operation and Maintenance Manual (O&M Manual) and requires the use of a formal process for the review, revision, and approval of Criterion which is coordinated by IFMPO and includes a review by the Facility Management Council.
 - The Criterion contained in the O&M Manual defines the minimum maintenance and operations criteria for the specific structures, systems, and components (SSCs) addressed by the Criteria that must be followed.
 - Organizations responsible for the operations and maintenance of the SSCs addressed by the Criteria shall be responsible for establishing appropriate maintenance or operational processes and procedures to meet the stated requirements.
 - The specific maintenance and operation requirements for the covered SSCs are contained within the specific Criteria. For most Criteria, implementation will require the following:
 - Implementation required by LIR 90 days after issuance
 - Equipment addressed by Criterion is in the MEL
 - PM is scheduled within the required time interval
 - PM procedure meets Criterion requirements